

Sept 4 Monday

2. Shrub

1. Bark

Paid of the 25¢ to
pay for intelligence
paid out of \$1.36
March 31st 1860

10 00

3 25

6 75

July 18th

Paid Mr Lyett for
repeating cards for the
drawings & brass. for 75¢

List Complementary names

Genus Meekia, White & St John.

2 } Meekia, Salic.

Species

Genus Meekia, Salic.

2. Equisetum Meekia, Hall.

3. Salicetes Meekia, Hall.

4. Potamogeton Meekianus, Sumner.

5. Forficarum Meekia, Hall.

6. Meristoph Meekia, Hall.

7. Archimedes Meekia, Hall.

8. Donocardin Meekianus, Hall.

9. Dentalium Meekianus, Girty.

10. Endymionia Meekia, Billings.

11. Pecten Meekianus, Conrad.

- 2 *Dosinia* Meeki, Common
- 10 *Cardium* Meekianum, Salt
- 10 *Anemonia* Meeki, Salt
- 11 *Butterfly* Meekianum
- 16 *Polya* Meekiana, Salt
- 17 *Actinoceras* Meeki, Salt
- 18 *Spinifer* Meeki, Salt
- 19 *Gonolobus* Meeki, Salt
- 20 *Platystrophia* Meeki
- 21 *Archiledonia* Meekiana, Salt

Antiquarian paper — 3

Left at Room in Washington
 Sunday —

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also pay from Warron
 up to this date 232
 Nov. 1837

Recd pay from Department
 1st up to this date

2nd up to this date

4 March 28th 1868

Handbook of Geological
Terms: Geology & Physical
Geography - by David Page
Z. R. S. J. G. & Co 1865

Edinburgh & London
William Blackie and Son

Mem - Geol. Brit. & Pol.
Our Panopaea (Morisma?) Cooper
is very nearly similar to the
Jurassic species - *P. gibbosa*
Deek. Prodrôme p. 273. - Lutra
- sia. Phillips Geol. Yorkshire
p. 121. pl. IX fig 6. Not Sowerby.

Some freshwater Lower Cretaceous
species fossils - Unions, Paludine
etc. ~~Geol.~~ Jour. Geol. Soc. Lond.
Vol. XIV (No 55) p. 286.

Some of the small shells
of the fossiliferous strata of the
Jurassic period are very similar to
the fossil shells of the present day
and have been found in the same
localities. Vol. 2 (p. 113) p. 113.

Strophomena ventricosa
 The species was
 described by *Strophomena*
lanceolata which
 was described by 24/11
 placed by *Strophomena*
Strophomena
 I believe would be a good
 name.

Dalmanella present
 by *Strophomena*
 a note in the
 book
Strophomena
Strophomena
Strophomena
Strophomena

Who Linnæus should be named

Cyrena - see if our *Cyrena*'s
 with striated teeth are not
Cyrena or another allied?

Pholadomya - prob-
 not a true *Phol.* but more
 probably a *Pinna* or possibly
 an *Mytilus*. S. of that form.

Linnaea - preoccupied
 by a recent species of *Linnaea*

Linnaea - probably
 a distinct genus or subgenus
 same as that in which *Linnaea*
gossypia has been placed.

8
~~Theraps (constrictus) Hald. Mack~~
~~may be a true Thers~~

Last Illinois coal ill.
fossils —

Selenomya seleniformis Corp.
Narrower and not so deeply pinnated
as Corp. sp. No 5. and at Danville

S. radiata H. M. No 5 Canton Ill.

Cardiomya microgynensis Chubb
Coal No 5. Canton, Wp. C. Posey co. Ia.
New Harmony Ia. Coal No 3. Steuben Co.
Ill.

Schizodus curtus H. M. Wp. C. Posey co. Ia.
Grayville. Coal No 3. Ill. Coal No 4
Canton Ill.

Schizodus rugosus Gein. agrees exactly
in size and form with his large figure
same locality and sp. as last

Avicula p. recticollis Corp.
Hald. ^{sometimes} no radiating costae on

posterior wing, and seems to be
exactly the same we found in the black
shale in Iowa. Agrees closely with No.
subpapyracea Verr. Gen. Ruff. except
in having ^{sometimes} no rad. costae on post ear, which
is straighter behind. Coal No 3. near
Bryant station. I am inclined to believe
it the same

Edmondia ~~recta~~ ^{as seen well} Mack & Coal No,
5 Canton Ill. Seaville Coal No 1

Chirostoma ~~Wp. C. Posey co. Ia.~~ Coal radiata H.
Posey co. Ia. High in Wp. Coal No 4
Coal Canton Ill. Smooth var. very
abundant. Also in Schuyler Co.

Sp. Comenat. Coal No 6. Coal 3

Sp. Kent. Coal No 6

S. lineata (perplexus H. M.). Small
Coal No 5. Canton

Athy. sublt. Same loc. sp. as last
also Seaville ^{Coal No 1.} very abund.

Rhynch. senagensis Sw. Co. Canton
Ill. very ab.

Prod. verrucosus. Coal 4. Canton
Ill. common. This ^{above} not found in up. Co.

Hemipha. Crags. Coal No 6. Canton

Rhynch. Eutoniformis M. Co. No 5

Canton Ill. Grayville. W. of Coal No 1

Prod. Prattenianus. No 5 & No 3.

Canton Ill.

P. punctatus, Saville Fulton Co
Coal No 1. & highest coal

Prod. seminat. Saville ^{No 1} and all the

Prod. Nebraska. Coal No 5 Canton

Chonetes Smithi, Canton Co. No 6

Ch. mesoloba. Coal No 6. Canton

Loborot. boidens Coal No 1.
to top

Discina small (*Missouriensis* Sh.)
2 in. N.W. of Grayville station Mid coal
also all through

Discina like *C. senagensis* but not identical
- times along the middle of the
leaves like *Discina* the same
as *Discina* City? Roof of Coal No
3. Fulton Co.

Discina *Senagensis* No 5 Canton
Ill. and *Discina*

Discina *Senagensis* No 5 Canton

Discina *Senagensis* No 5 Canton

Discina *Senagensis* No 5 Canton

Discina *Senagensis*, Verm. There is
in the upper & middle coal
many of all, & it is very exactly with
Discina *Senagensis* fig. 1. It is often
to be seen in the *Discina* *Senagensis* - can
be distinct. *Discina* *Senagensis* is always much
than *Discina* *Senagensis* - can be
the same *Discina* *Senagensis* *Discina* *Senagensis*
Discina *Senagensis* *Discina* *Senagensis* *Discina* *Senagensis*
quite as well with some of *Discina*
some fig. 1. *Discina* *Senagensis* *Discina* *Senagensis*

biotha, M & W.

Gibbons ~~in adult~~
al, ~~nearly or quite~~ equivale, very
short
~~distinctly longer than the posterior~~
backward, that of the right is
to left, and ~~often~~ ^{slightly} indented
close up ~~just~~ behind the beak
~~margins~~; surface polished
times crossed by obscure traces of

Washington July 15 1866
Ticket to Chicago 22 50
Fronk to depot 50
Tell and self in street car 12
Drink at Baltimore 50
Supper at Harrisburg 50
4 Breakfast 75
Lunch 20
Supper 75
Sleeping car & baggage 1 25
16 Breakfast 75
Dinner 75
Breakfast 75
Dinner 65
Expense Chicago to Springfield 8 00
Sleeping car 2 00
Ticket on car 25
Postage at Springfield 70
March 6th Express on packing photo 90
7th ~~little package to A.H.~~
41 97

12
After the Express on book from 41 77
Chicago 45

March 13. Express on package books fr.
Washington 1.55

Apr. 6. Express proof pl. fr. Chicago 25

" " 2 boxes specimens from St. Louis 1.90

45.92
25.00

70.92

June 5. Express on book 1.55

" Springfield Director 3.00

" 10 Loaned Chas. Northman to
pay express on package 1.55

" 11 Package - Illinois Chicago 1.55

" 13 Express on post cards fr. Chicago 25

July 3. Package cuts fr. Chicago 65

" Express Box specimens 75

" Bill fr. freight on boxes 1 10

7 Express on Big. Nauticus 3 90
13 80

13
Am't broken on

13 80

July 8th 1 Box specimen express 1 25

" 10 Express on box 60

Aug 6. 3 Half exp. on

Express papers on scorpion 57

Aug 27 Express on box specimens 75

" 1 Package sent out to Baker 10

" 20 Express on 1 ft plate 5 15

" 27 Express on 1 ft plate 1 95

" 30 Express on box and package 1.10

25.22

Sept 9. Express on book borrowed fr.

Dr. Stimpson 40

" 12 Express on cards fr. Baker 25

" postage on letters to Sumner 12

" 20 Package to Stimpson Express 50

Oct. 17 Express on small package 75

Oct 19. Express Springfield to Galveston 6 75

" Dinner 75

" Lodging & breakfast Galveston 1 20

9.497

Oct. 20. Ticket Galesh. to Burl. 1 80

Nov 3 Express on package of
fossils, minerals and by Mr
Dyer to Mr. Washburn
for comparison

Nov 6. For full boxes from
Burlington to Springfield 8 60

Paid for fish tooth for
Mr. Worthen at Burling. 5 20

Supper at Keokuk Station 50

~~Nov. 13, Express on package from N.Y. 1 00~~

19 Postage on paper (M.S.) to New S.
Haven, & from there to Philad. 48

1868

28 75

Dec. 7th Ticket on Express on box 1 00

14 Postage on paper sent to Philad. Acad 54

~~23 Package to Mr. Worthen 2 50~~

~~24 Express on box 2 00~~

4 79

Dec. 27 Express on box 4 19

Jan 3rd Express on specimens to Mr Dyer 50

~~8 Telegram to Mr. Worthen from Warsaw 80~~

Feb 4 Expt. on specimens returned to Dr
White with postage 40

15 Express on packages of
borrowed specimens returned to
Prof. Marcy & Churchill 1 10

Postage on proof to Philad,
and stamp returned to Prof. Marcy 24

10 99

March 9 Postage on proof, Philad 18

10 " " M.S. 48

13 Express on package to Fairbanks 30

Apr. 1. Paid for carrying up wood 50

7 Photographs of fossils 4 00

12 Freight on boxes specimens
from Danville \$6. 91 1 45

amt Bk over 6.91

Apr 16th 1869 Express on
extra papers from Philad 1 15
18 Express on Blastoids
amt back to Mr Wachsman 6
24 Express on ...
25 Express on ...
26 Express on ...
27 Express on ...
30 Load wood 5 00
May Express on ... 1 25
9 Postage ... 6

19.59

1869 June 9th Express on
book for Cambridge 1 15

June 16 bundle plates fr. Chicago 1.75

19 German translation 3 50

29 Express on ... 1 50

July 8 Gas bill 2.43

July 17th C. O. Box ... 1 15
20 Exp. on book sent back
to Cambridge 1.00
29 Express on specimens from
Mr Wachsman 40
Aug 9 Package from Mr Wachs. 75
Photogr. drawings 2 00
13 4 quires cap paper 2 00
16 Exp. specimens from
Wachsman 30
20 postage on proof to
Philad. Sent 15
21 Express on book borrowed
from Cambridge 1 55

10 98
22.56

In Knox Co. Ill. Mr Green
found in the Lower ~~found in the lower~~
lower Coal Measures between No 3,
and No 5 Coal, the following fossils.

Spirifer canus, Morton.

Sp. planus, Shumard

Product. Longispinus, var *muricatus*

P. Prattensis, Woodward.

P. Nebrascensis, Owen

Chonetes mesoleuca, M. & P.

Avicula sp. *pellucida*, M. & P.

Avicula sp. (Pecten) *carbonarius*, Stevens

A. Occidentalis, Shumard

Avic. neglectus, Grunty (Grunty sp.)

Avic. longa, Grunty sp.

Edmondia ovata McK.

Etolium aviculatum, Swallow sp.

Gouldia Knoxensis, M. & C.

Gould. bilobata, Stevens

Alorisma Gruntyi, McK

Also from local No 2. ~~Warrick Co.~~
~~Mr. Green.~~

Avicula aviculata Sw.

~~*Spirifer*~~ between

Knox co., Coal No 3 and 5 cont.

Lima retifera, Shum.

Nucula parva M. & C. - *Byrichi*

Plent. Gravillensis M. & P.

P. sphaerulata, Leon.

Macrochelys inhabilis?

Bellerophon ellipticus McK.

B. Montfortensis, M. & P.

B. Meekiana, Sw.

B. percarinatus, M. & P.

Polyphemopsis paracuta, M. & P.

P. inornata, M. & P.

Plenophorus Pallasii Grun. not Vern.

Orthoceras cribratum, Grun.

Enomph. rugosus, Hall

Hemipronites arenaria, Phil.

Mercer.

Fossils from Coal No 2 ~~Marron~~
County - Mr. Green

Orthis resupinoides Leys

Prod. semireticulatus

Sp. perplexus, M.C.

Sp. cameratus Mort.

Athyris subtilita Hall

— Marron Co. Ill. Coal No 2
Mr. Green

Aviculop. aviculatus Swal.

Sp. perplexus, M.C.

Prod. Prattenensis, N.

P. Nebrascensis D.

Chonetes Flemingii M.P.

Exanoph. rugosus Hall.

Hemipronites crenistria

Coal No 1. Marron Co. Ill. Green
Prod. mucronatus

Sp. cameratus,

Sp. Kentuckensis

Chonetes mesoloba

Allorisma subcuneata

Rhynchonella Eatonaeformis M.C.

Solenomya radiata, M.M.

Athyris subtilita

Edmondia ovata Meek

Cardiomorpha Missouriensis Sh.

Avicula carbonaria Stearns

Lima retifera

Schizodus cuneatus Rossicus?

Streblospira tenuilimata

Pleuron. Grayiellensis

P. sphaerulata, var. *depressa*.

Belleroph. montfortianus

Hemipr. crenistria.

Prod. longispinus

P. semireticulatus, Swal.

Emisodinus? *tuberculatus*,

the specimen belongs to the
Pholites (Came from roof of four feet
 bed of coal (1862) on West Creek
 Parker Co. N. D. a.

the typical species of the
Emisodinus Co. Came from bed of
 1862 (1862) on West Creek

Bellerophon Stenocranius M.C.
 Comp. our smooth sp. from Rulo, Neb. with this.

Bell. interlineatus Poell. as ident.
 by Seim. occurs in Lower Coal. M.
 of Ill. Grundy Co. Saw sp. about the size
 of *Seim's* *Janlongi* fig. It may be
 the same as *B. ellipticus*, M.C. but
 his figures look different.

Pseudomonotis —

Mr. Bradley found on Salt Cr.
 Vermillion Co. Ill. in a grayish
 limestone he thinks holding a position
 50 feet above the Danville Coal. —

Pseudomonotis Haini (sp?)

Gervillia longa.

Mucroa ventricosa Hall

Leda heliostriata

Schizodus

Myalina Swallowi.

Myalina Subquadrata

Avicula sp. occidentalis

Bellerophon Montfortianus


Ath. subulitita

Prod. Nebraskaensis

Hemipronites erasus.


Pleurot. Grayvillensis

About twenty feet ~~high~~ below the
 above mentioned bed and at the same

Locality Mr. B. found a
specimen of an *Archaeocidaris* or
Eocidaris like this 
and agreeing exactly with one found
by me on the plateau river, and figs
for Hayden's report. He also
found *Isoulinea apocialis*

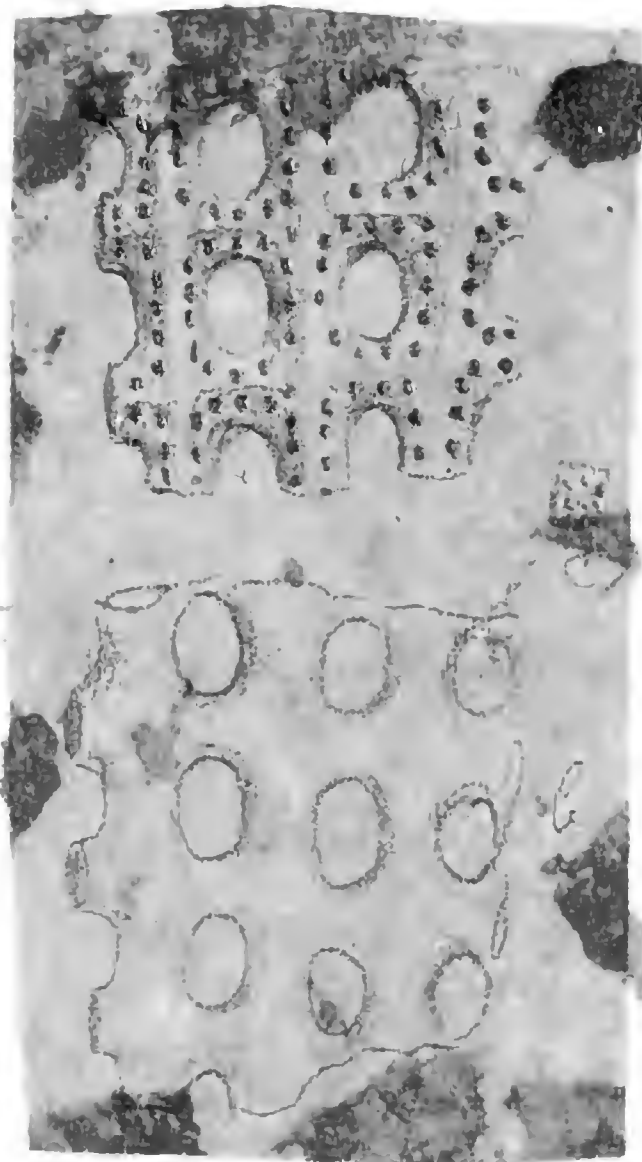
Polyzora biarmica, Keys.
Prout identifies this sp. from the up. Arch.
Li. at Chester Ill. although in Russia
it is a Permian sp. See St. L. Acad.
Vol. 1 p. 450

Genus Synocladia

Mr. Worthen found a species undoubtedly
this genus, and scarcely, if at all, distinct from
S. biserialis, Swallow, in the St. Louis limestone
of Jersey Co. Ill. It shows two rows of
pores on each branch, with a slightly
defined ^{nodular} angle between, there being gener-
ally about 4 pores on each side, opposite
each fenestral. There are also two ^{to three} rows
(somewhat irregular) on each dissepiment
or cross bar, and these cross bars are
rather more distinctly deflected, or gemic-
ulated  than in the specimens of *S. biserialis*.
So it is not a Permian any more
than a Carb. genus. The little nodes or projections
on the mesial angle are arranged about one for
each fenestral. Sketch above - about 2 diam

On further comparison of the above, with the type
of Prout's genus *Septopora* from the Chester Li. (St. Louis
Acad. Vol. 1, p. 448) I can see no specific dif-
ference. Prout's fig. is very poor, does not show gemiculation of dissep.
I can see no sp. dif. between the Chester sp. and those from
the Coal. Ill.

Turritella laevis, Eichwald



He says he does not
know if there are
any other species
of this genus
other than of 3 or 4

He says it is a well defined genus
and the difference between the two

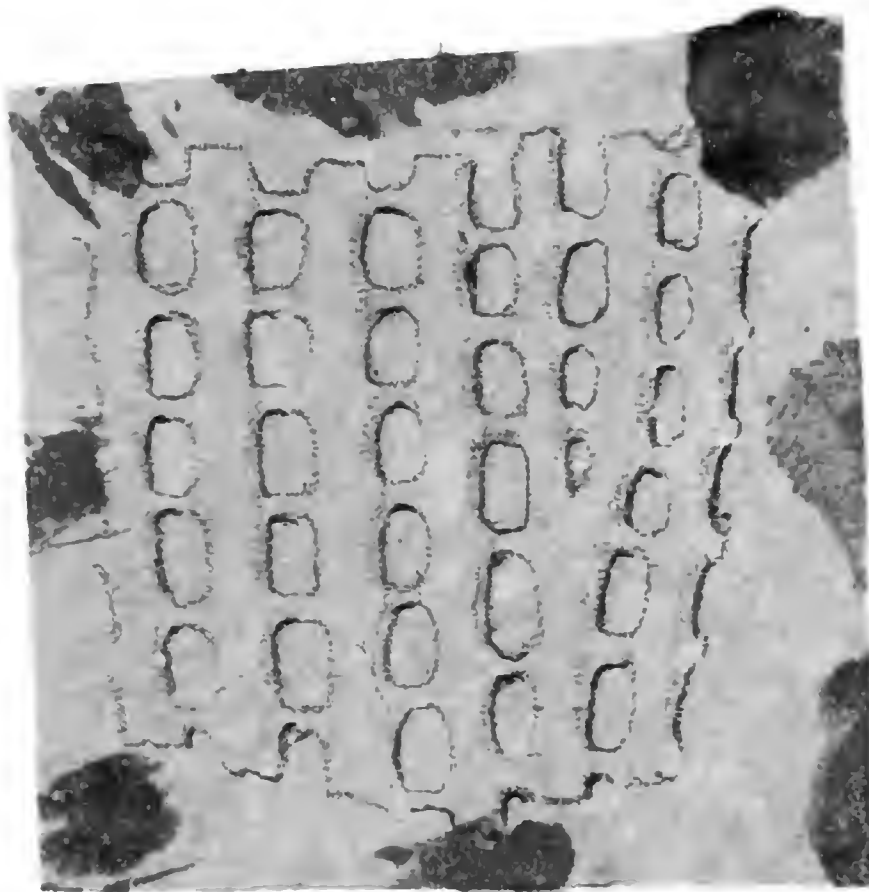
The fact that it has pores on
the base shows an impor-
tant character, that being the
most important character of that
genus. It only wants the base
to be arched or angular, to be
a true *Turritella*† to which you
it should doubtless be referred

† That is, if *T. biserialis* of Sw. is a *Synoch*

Turritella? of Carboniferous

Eichwald has figured and described two
Carbonif. very small shells, from Carb.
Rusia, related to our *Turritella*?
sternsana. He first described them in
Bull. Soc. Nat. Mosc. p. 161 (1856?)
under the names *T. spirulum* and *T.*
aens. In *Lehrbuch Rofica*, 1 p. 1120 & 1121
he redescribes them, and figures them
in the atlas of same (Ancient period)
pl. XLII fig. 4 & 5. The *aens* is about
0.14 inch long, with six or 7 vol.

The *T. spirulum* 2.16 is longer, more
slender with 10 or 11 vol. both have
revolving line just a most common
on the *aens*. Mouths of both rounded
future deep. Mouth round.



Demistella elegans
-*tipina*, Eichwald.

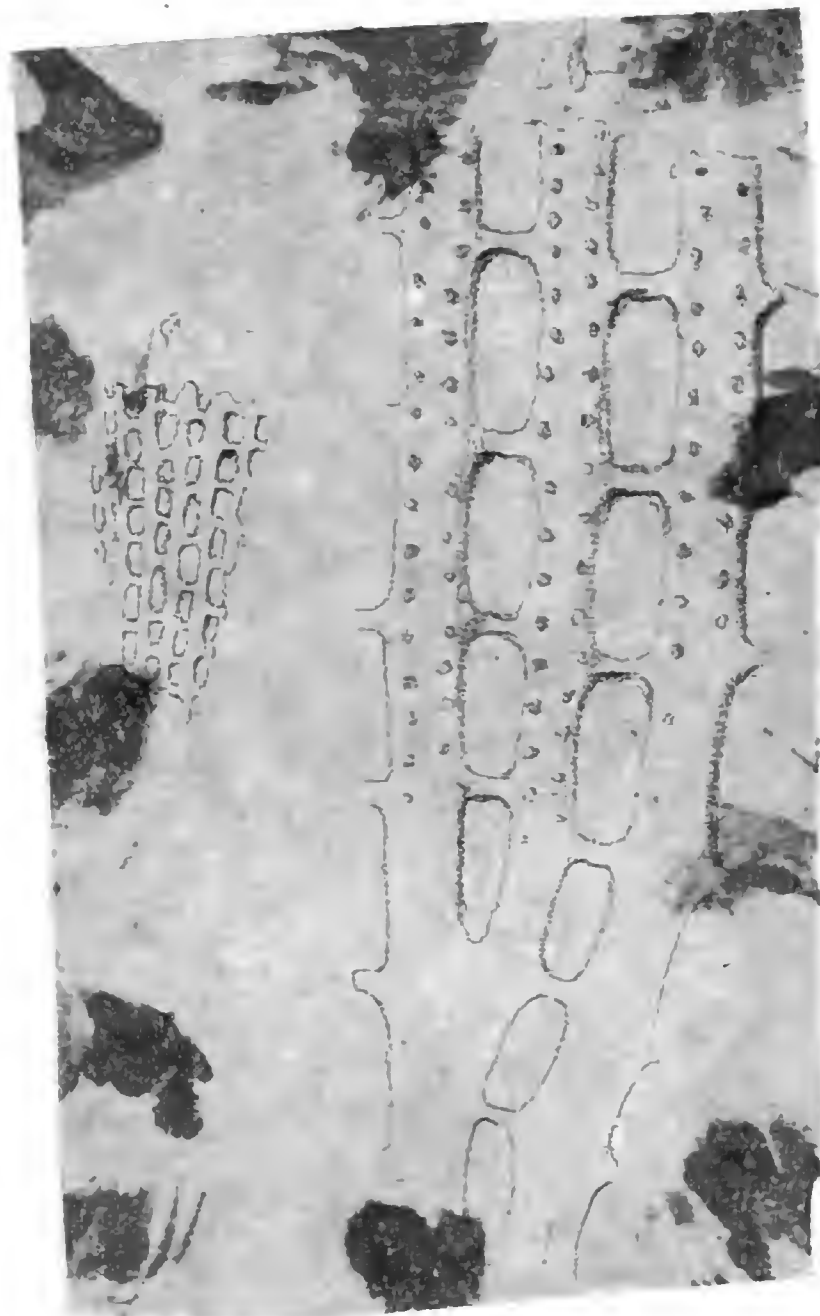
Spongia Rosacea.

Pl. XXIII, fig. 46.

Sketch of his fig. full
breadth, but only about

one third its length (magnified as he has it).
He says non-poriferous side is striated
long. 4 to 5 striae on each branch. Porifer-
ous side with cells arranged in two rows
very approximate, and separate by
a little distinct Carina. Diastema
or interspaces equal. Along with
angles rounded, or even become
and are slightly wider than the branches.

12 branches may be counted in a
space of 3 lines. In some large
individuals he says there are only
6 branches in a space of three
lines.



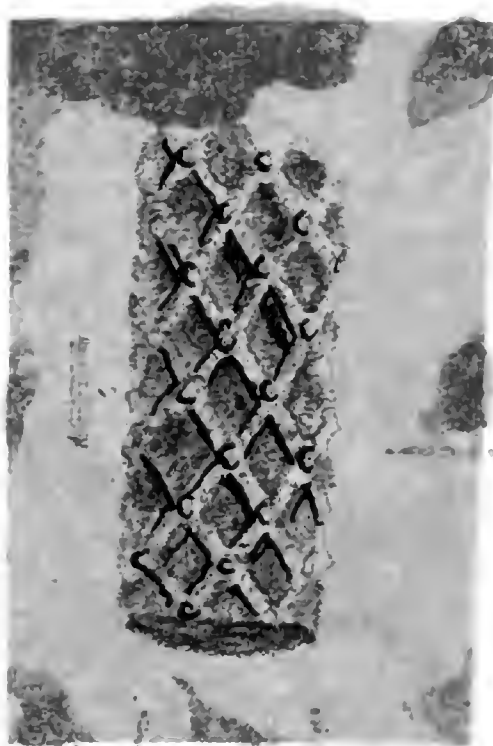
Demistella ringosa
Eichwald, *Spongia* Ruff.
Vol. I, p. 358, Atlas,
pl. XXIII, fig. 47.

He says the branches
are nearly parallel and
a little diverging in cor-
respondence with the direction of the
dilatations (branching).

He says the pores are
in groups, and are

very regular, and are a little
wider than the branches. Cells cylind-
ric and disposed in two rows, longitu-
dinal without any carina between. They
are alternating, very approximating, and a
little tapering and oblique within. The non-
poriferous side is smooth, and deformata
de striae longitudinalis, as which it
differs from *Spongia* *tipina*, which has
the surface striated and nodes.
But *Demistella* is quite a distinctly higher sp.
with oval punctures.

— Lepidodendroides; My little Nebraska (Lyassic?) coral or Bryozoan with rhombic cells, is very like a group of minute Carboniferous Russian species referred by Eichwald to Vincularia, Defr. It is especially nearly like his V. ornata. (Bull. Soc. des Nat. de Moscou, 1855, No IV, p. 455) as fig. in his Lethaea Rossica, Atlas pl. XXIV, fig. 4. and described Vol. I p. 400. of which



cells large flat or little distinct. The borders opposite of the cell are covered with 7 to 8, and some 9 or 10 small tubercles which form in two series of the curved range.

Lima Lexingtonensis, Humm: sp.

In Worthen's Collection I saw a Lima from the Coal. M. at Grayville Ill. and from Jamestown, which I believe to be identical with a shell I saw in the Mr. Collection labeled Cardium politum, but which seems to agree better with Shumard's Cardium? Lexingtonensis, than with any other shell. I know of ^{in his papers} that he has referred to the same Cardium. The Grayville shell has all the external characters of Sima.

It is marked by fine radiating striae, some 4 or 5 of which on the posterior half of the shell, are separated by a smooth furrow wider than the others; farther forward the striae ^{to} enlarge, moderately distinct, ^{irregular} costae. Very fine concentric striae mark the surface concentrically.

Erissocrinus M.M.

We now have two species of this genus from the Burlington Li. at Brim. I have also seen two other new species from the Keokuk Li. sent by Mr. Safford, found at White creek Springs, Tennessee. So we may regard it as a settled question that this is a Carb. genus. One of the White C. sp. species is very closely allied to the typical *E. typus*.

Pleurostomaria - The smooth shouldered Pleurost. from Mr. Norton's shaft, and *Rula*, etc. occurs in the upper Coal M. of Ill. in Macoupin Co.

Paterocrinus hemisphaericus, Shum.

Dr. White sent a good specimen of the Upper Coal-Measure Crinoid. I made sketches below, ~~sent~~ Shumard and he wrote back that it



"is not *P. hemisphaericus*". Dr. M.M. says he did not clean it so as to show the specific characters.

Leptothorax onia prolifera Meb. This coral, I have ascertained from specimens found at Springfield, does not even belong to the *Leptothorax* *onidae* as it has distinct transverse tabulae, bending down towards the outer wall. It seems to belong to the Carb. Devonian genus *Siphophylloids*, E. V. M., though I have not seen the septal part very satisfactorily.

1 Cladodus — Bron 9 sp. —
1 Devon, 6 Mt. Li., 2 coal.

2 Diploodus Bron. 2. Coal.

3 Petalodus Bron 8., all Mt. Li.

4 Periporistis — 1 only Mt. Li. England

5 Chomatodus Bron 4 sp. Mt. Li.

6 Xystroodus — 1. Mt. Li. Europe

of these 6 genera all are common in Europe to the Carboniferous or not ascending to later rocks; while 4 of them are in Europe peculiar to the Mt. Li. and one (Cladodus) nearly so.

Murchison says (Siluria 1854 p. 417) "Diplofishes have amongst them provided the most exact characters of the age of rocks".

Nebraska fish remains from

the so called Dyas

~~Alpoides mortifer~~

~~Diploodus compressus~~ Newb. & Worthen

1 Mt. city — bed 6. S.W. Iowa, Manhattan Kansas —

near bed 6. mirabilis Ag. Mt. Li.

2. Diploodus compressus N. & W.

Coal. Ohio, S. Indiana, Iowa

3 Petalodus destructor,

Bears striking resemblance to

P. acuminatus Ag. from Mt. Li.

of Europe

4 Periporistis semicircularis, N. & W.

sp. Only other species of the Gen known from the Mt. Li. of ~~Europe~~ England

5 Chomatodus arcuatus St. J.

Marked resemblance to C. loriformis, N. & W. from Keokuk.

6- Hystrodus? occidentalis, St. J.

The genus Hystrodus was founded
by Ag. from reception of Cochliodius
striatus and 2 or more other sp. from
the Mt. Limestone of Europe

7 Deltodus? angulatus, N.W.
Wp. Coal M. Mts. Iowa and Ill.

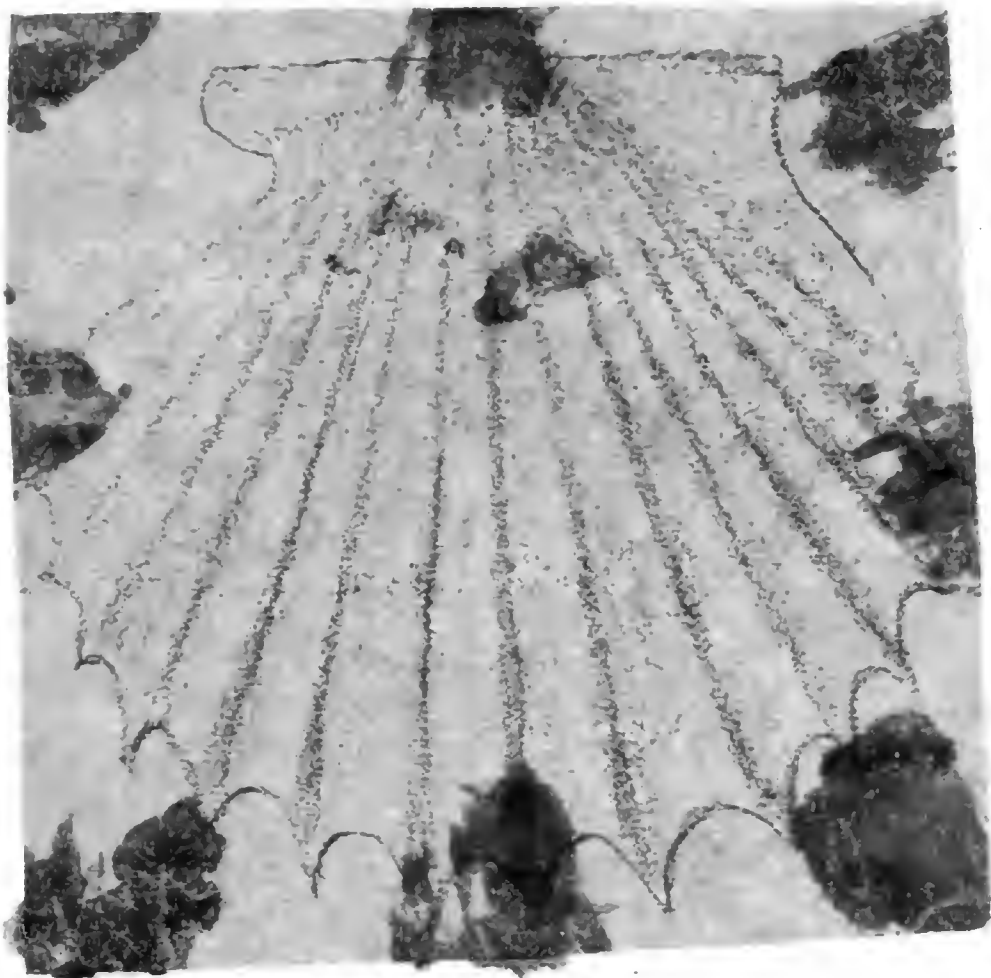
This St. John says has a remark-
-able resemblance to Deltophychinus acutus
Ag. M.S. the type of the genus Deltophy-
-chus (old Cochliodius acutus) from
the Mt. Li. of Ireland.

Phillipsia scitula.

Mr. Bradley found a specimen I
cannot distinguish from the above
at Pennville Logan Co. Vermilion
Co. Indiana, 1 ft. or below No 2 and
associated with *Plant carbonaria*, *Ath.*
sub., *Monotis muscoba*, *Lythax pulifera*
Helicotoma, *sp.* *planocostatus*
Dicyna nitida, *Helicotoma*, *rectilateraria*
sp. *ventricosa*, *sp.* *cameratus*, & *lineatus*
Fusulina cylindrica, *Prod. Semin.*
Naticopsis nodosa, *Hemipronites crassa*
Rhynchonella Grayvillensis, *Prod.*
low (Bradley.)

Schizodus Schlotheimi Gärner
Eichwald cites *Sch. obscurus*, Sow. as a
synonym of the above, and says that
Dr. Severinus de Vern. from the Old Red
is so very similar that he is brought
to believe it only differing as figured, in
consequence of the diff. ^{of age} ^{of the rock}. I do
not believe this, but it shows that
shells of this kind are sometimes so
very much alike that from widely dif-
ferent horizons that it is unsafe to base im-
portant conclusions upon them.

Antilope *sub.* *obscurus* *sp.* *sp.* from
Vermilion Co. Ind. is very like *S. car-*
linatus *Eichwald* from Lower Carb. Russia
but has the septa curved the other instead
of being side. Which is not so good as the
Russian sp. in *Fossilium Indag.* Tab. XV
fig. 4 a b c.



Strophomena pictus,
Eichwald. Zool.
de Russie (En Lang
Russie). St. Petersb.
1846, p. 425

The fig. is a tra-
cing of Eichwald.

fig. in *Lethaea Rossica*, Atlas pl. XXVII,
fig. 29. He describes it on p. 933 of
Leth. Vol. I. This near. P. Brodham
on p. 49. but it is described as having 15
concentric ribs. He says it is smooth or
only traversed by fine concentric striae

He thinks it may be the same as
P. indeterminata. de Veron. Palaeont
Rus. p. 327, pl. XXI, fig. 4

Bakewellia antiqua. Eichwald says
is found in the Carboniferous rocks of Kal-
ouanovsk, near Moscow, as well as in the
Gile. Magn. (Permian). See *Lethaea Rossica*
ancient period sec. part p. 984. He also
even thinks it occurs in the old Red sandstone!

Strophomena analoga (deprisa)

I saw a large specimen of this species
Mr. Washburn's collection from the
Lower Burlington bed. This is the
first example I have seen since from
the lower horizon in this country
above the Colitic beds under the
Burlington limestone

I afterwards learned from
Mr. Washburn that he has it from the
Burlington beds

I changed as *Rafinesquina* de Veron
Eichwald says in his *Lethaea Rossica*
1860, p. 999, that this species occurs in
the Carboniferous and Goniatite limestone
of Kasatschy-datchy; and in the Magn-
esian (Permian) limestone of ~~Greenland~~
Ovenborg and other localities
Mytilus Pallasii, de Veron. he says also occurs
at the same locality associated with the
above in the carboniferous

Mr. Froadland
 found specimens of a mouldered
 sp. of *Chonetes* - seen from below
 and the hollow shell etc. The found
 in Montgomery Co. Ill. in a soft shale
 some with remains as in a small and
 large. There are great numbers of
P. sphaerulata Com. Also *Alasceras*
primus Com. *Alasceras* *Alasceras*
Alasceras *Alasceras* *Alasceras*
 Rull 70



The specimen is a large
 hollow of a brachiopod, the left
 valve of a pedicle which was
 the real means of the
 Ill. It is a large one, a few
 and inclined a little backward.
 It seems to be somewhat flattened
 over the area or hinge plate of the
 section, excepting that it has a distinct

Cryptocanthia conferta, and
Stolites 2 to 3 in. diam. were found
 in the same. Associated with a few
Strophomena, and the same other fossils
 associated in Iowa. The *Cryptocanthia*
 in Mr. B. found these in
 Ill. in making such a bed as they
 occur in Iowa

Strophomena (p. 11). This is not like the
 first under the hinge of the *Strophomena*, but seems
 to be oblique more as we see in *Strophomena*
 etc. The *Strophomena* in question appear to
 be as sketched. While the fine line extends
 up from them behind, as seen in Ill. I do not
 know the outside of this shell though there are
 some app. of scaly or scaly rock. east terminating
 at the margin of ant. ear and below.

Danville Sp.

Planol. Beckwithiana

Ammono. ventricosa Hall

Strophor. enalpa M. W.

Prodrusus. Sp.

Prod. little thin sp. I. cancrina Gm.

Prod. wabashensis, M. W.

Ammonopecten ustulatus Cox

Li. na. ulifera Shum.

Pecten Broadheadi, Swallow

Ammono. Ten. cancrina M. W.

Spurifer planosomus, Shum.

Li. thyracaris - (Sp.)

Dentalium Mackrannum Gm.

"Tentella" Stenocoma, M. W. This is probably the same as L. by Swallow. Gm. It agrees exactly in the number of spiral lines with S. Stenocoma

Ammono. (Gm.) Springeri, White & Sh.

Ammono. grandis M. W. was

found in the coal layer 10 m. S. of Springfield in carbon. coal strata

I have seen from Danville Coal-M. Ill. the blue of Ill. corals are not so large

Enovilla longa Gm.

Pecten aviculatus Swallow

Ammono. peratensis M. W.

My new genus P of elongated and notched lirabae

Bellerophon Montfortiana

B. carbonaria Cox

Macrodon tumidula M. W. (certain)

Orthoceras cribosum Gm.

Chonetes moolaba M. W.

P. glabra Gm.

Ammono. parva M. W.

Solenomya

Rhynchonella ita, Marco

A little smooth Pectenoid shell (with very minute ment. on body, and radiating costae on both ends, which I can in no way distinguish from Pecten neglectus, Gm.). The hinge shows a distinct cardinal process in the middle, and smaller pits or excavations on each side to the extremities of the hinge, exactly as Corbopeden is described by Winchell, and I must think it belongs to his genus, I am not sure whether these are true cardinal pits or excavations. The shell being so small it is difficult to determine. The excavated cardinal edge, however, has some begetting and inclined back a little as if the margin had been a little gaping, and the little pits have been deep. It is not a distinct area, but one.

The Danville coal is about the

6 ft. from below, of the corrected 12th section, being between 200 and 300 ft. below the top of the series. The coal 5 to 6 ft. thick, and the highest work is bed. The shale containing the fossils comes in, slightly over the coal.

Berrillia longa, Smith. A specimen from Danville, shows the hinge to be as below, looking the cardinal ^{a 3/4 ant} area, which inclines back so as to show that it must be ~~gaping~~ ^{gaping} ~~as does~~.



It is a little convex or slightly arched with the back, and longitudinally striated some what as in Myalina, and entirely without any cartilage (but ^{excepting a small} ~~whatsoever~~ ^{small} ~~in advance of the back left valve~~ ^{in advance of the back left valve} at ant) a distinct, antero-posteriorly compressed cardinal tooth is seen arising from the inside of the valve under the cardinal margin but attached to, and projecting inward distinctly beyond its edge, so as to be seen from above. It is round

- as in front, and concave behind, with a little fork or space just behind it apparently for the reception of a similar tooth in the other valve; while just back of this space there is another much smaller tooth, connected with the inner side of the cardinal edge, beyond which it scarcely projects. Along immediately ^{not attached to the} under the cardinal plate behind, there is a large linear posterior tooth (p) with a linear furrow above it evidently for the reception of a similar tooth in the other valve.

From these characters it is clear this shell is no Berrillia. ^{separating it from} ~~and~~ unless there is some difference in the muscular impression, ^{which is improbable} ~~it must~~ ^{it must} certainly belong to that genus. ~~Possibly it may~~ ~~bear the same relations to Berrillia that~~ ~~Anculopora~~ ~~does to Pecten, or Anacardites~~ ~~belonging to Anacardites in wanting a~~ ~~cartilage foot~~ The specimen is converted into brilliant pyrites, and shows rather

the outside and inside, so that there
 can be no doubt in regard to the
 right valve is also seen joined in
 so as to hide the inside of the left. At
 one place it ^{can. edge} has cut through the left valve
 and shows that it has the same kind of an an-
 as hinge plate, inclined back, and just below
 it the same kind of a long linear posterior
 lateral tooth, or rather two of them, the upper
 one being formed by the ^{inner} ~~inner~~ edge of the
 hinge plate and the other a little below it with
 a groove between for the reception of the end
 tooth of the other valve. Of the presence of
 these two ascending teeth in the right valve there
 can be no doubt.

Dillwynophon Meekianus Swallow.
 Occurs in the Upper Coal. M. at Spring-
 field Ill.

Genus *Thecidium*, recently discovered
 in Carb. Li. of England by Mr. Chas.
 Moore - See Geol. Mag. July 1868, 343

Pecten Hawzi = *P. Broadheadii*
 Mr. Broadhead sent me a specimen
 of the *P. Broadheadii* from the original
 locality, and it is certainly the same as
 the *P. Hawzi* of Girty. I made a tracing
 of Girty's figure, and sent it Dr. Stevens, to
 learn if it is not the same as his *P. car-*
-boniferus, and he writes me that it is
 exactly the same. It occurs at Danville
 Ill. associated with the 5th Coal, and at
 numerous other places & positions in the up-
 per Coal.


This sp. is evidently closely related to
P. exotica, see p. 40. from the Carb. Li.
 of Oural Russia.

Sayornis. A beautiful little regularly costate (costae becoming nearly obsolete on the body whorl) species of thin grines from 25 to 0.30 inch long, from the roof of the Danville coal, Ill. in the Ill. collection, converted into brilliant pyrites, shows the extreme apex perfect, and it is not reversed, as in *Turbonilla*. Its apex is polished.

Lucula tumida, Phillips, var. *gibba* Fleming. A specimen of this shell, or at any rate so labelled, sent Mr. Davidson to Mr. Worthen from the Mt. Limestone at Carlisle, Scotland, agree exactly in all external characters with *N. ventricosa*, Hall. I have not seen the interior or hinge of *N. tumida*.

Myalina peratimata occurs at Danville Ill.

~~Lucula~~
Lucula primaeformis is a small fragment sent by Smith, to Mr. Worthen showing that it has sometimes a gas. distinct rather strong, interrupted elevated lines or ridges parallel to the lines of growth, but they are not near so sharp, so regular, or so continuous as on *N. tumida* N.B. sp. It is also a more common shell, sections being thus



It shows the fibrous structure distinctly under a good pocket lens.

Michelinia tenuiseta, Phillips. There is a species of this genus in the up. coal M. at Springfield Ill. very like this but its wall pores are not arranged in horizontal rows, but a single vertical row near each corner. vesicles granular, walls striated. Another palaeozoic genus in Soc. of N.B. D.D.

Amicella Hansmanni. A specimen, sent to
 Weather by Gault, shows the cast of the foot
 between the beaks to be exactly as in My-
alina parvula, and that there is no ad-
 tumor ear; While the cast of its hinge
 shows that it is as in Myalina. There
 being, however, in the specimen named
 not more than about 3 cartilage furrows
 - the hinge plate being narrow.

Myalina Swinhoei. Cast from S. Ill.
 the same figured - Ill. Report, show
 no indication of a pit between the beaks,
 but there is a narrow muscular impression
 just in front of the beaks thus.



There seem to be not more
 than about 2 or rarely 3 cartilage
 furrows. They are much longer than in
M. Hansmanni.

Bellerophon - The same referred
 by Gault to B. intermedia Port. at Danville.

Nucula parva, M.C. I have seen good
 specimens of this from the original locality.
 M.C.'s figures are very good. It is decided-
 ly distinct from N. ventricosa, Hall. which
 is larger, more elongate, with less prominent
 beaks, and a prominent incision of a transverse
 anterior ventral region.

M.C.'s species is very like N. Brynichi
 as I find by direct comparison. The pro-
 portions of the two are as follows.

N. Brynichi, from Gaulty sent to Ill. coll.
 length 0.31 inch; height 0.22 inch; convexity
 0.16 inch

N. parva. length 0.22 ⁱⁿ height, 0.16
 in ch. convexity 0.14 inch

This would make the latter a little
 more convex. I think it also slightly straighter
 on the posterior dorsal slope, and its beaks
 a little more prominent.

It is as well as from Springfield Ill.

The genus Bellerophon occurs in the St. Cuthbert beds (B. peregrinus, Sanby), and of course may be considered as a Permian type also - as it is extremely improbable that a genus would have died out during the Carb. and been recreated during the Trias (or Eocene which over this)

The curious large Urino-like shell Hayden found in No. 1. at Big-Six, is very similar to a lower Tertiary species figured in Bull. Geol. Soc. Fr. Tome XII, pl. XXXIII, p. 1235. (2^d ser) and referred to the genus Urino, but acknowledged to be associated with marine forms only.

Pecten aviculatus Bradley found at Daville Ill. in a f.p. coal m.

Aviculifera accidentalis Shum. is not A. occ. Winchell. Process Acad. N. S. Jan 1863.

Pecten Swallowi, McCoy. See in McCoy's Brit. Pal. Geol. p. 478, that he mentions, that when the very thin superficial layer is removed a number of small interrupted zigzag and divaricating scratch-like markings app^r. This would make it still more like ~~Swallow~~ P. aviculatus, Swallow, than I had supposed. He also speaks of very thick, divaricating internal ridges diverging at an angle of 75 degrees. These are not costae I take it but merely two ridges as in P. aviculatus. P. aviculatus Swallow occurs at Daville Ill.

Memorandum Coal For

Pecten valdaicens, M.V. & R. pl. XXVI, fig. 9. I have the same ^{zigzag} surface markings seen on the inside *P. aviculatus*, Swall. though, its form is different and they seem to be external markings.

Broadhead sent me a specimen of *P. Broadheadi*, from original local. That I am nearly convinced is the same as *P. Hammondi* of ~~Swallow~~ Gentry.

I believe Conrad's *Prisconaria*, to be the same shell figured by Gentry as *S. Ropicus*. A specimen apparently of the same sp. as the Kansas form occurs at Danville Ill. It shows the same large elevated, and less ventricose beaks than *S. curta*, M.W., seen in the Nebraska so-called *S. Ropicus*, and may be specifically distinct. If so Conrad's specific name *ventricose* may have to stand unless ~~it~~ his shell may after all be the *S. curta*.

Memoranda Coal - M. J. G.

Productus Willmanni, M.C. This form I had supposed only a variety, or larger size, of *P. nebrascensis*, Owen. Specimens in Worthen's collection showing the dorsal valve, however, to have the mesial ridge within, not bifid near the hinge as in *P. Neb.* & *P. Scobine*. While its cardinal process, its distinctly so bifid at the end, exactly as in *P. symmetricus*, M.C. from which however, this form differs in having a larger ^{erect} and a smaller appressed set of spines. It occurs in Ill. in the Upper beds of the Lower Coal. Measures

Aviculopsecton Whitei. Rogers figures this from the limestone layers and beds of calcareous shale of the bituminous coal-fields of the western part of Ill. under the name *Avicula*. See his report. Vol. II part II, pl. 833 Fig. 689, 1858. He figures same p. (fig. 691). *Pleurot. latulata* under the name *Pleurotomania*.

Memoranda in regard to Coal Measures fossils etc

Rhynchonella asagensis Swallow occurs in Upper Coal M. Ill.; Also

Campophyllum torquatum

Strophomena subrotunda Swallow occurs at Grayville Ill. showing the little pitting of the surface and all other characters

Avicula picta White Hall occurs in Upper Coal M. of Hamilton Co. Ill.

A species of Cyrtoladia, very like subseriales; Swallow, but without a distinct median ridge or little nodes along the middle of the pinniferous side of branches. Occurs in upper Coal M. Marion Co. Ill. near Central City, with various other upper Coal M. fossils. It has but two rows of

(Memoranda coal - M. fossils)
forms. May be new sp.

Strophomena subrotunda. Hall vol. 1, pl. 70, fig. 2 d. shows the anatomy incorrectly. Specimens from Cincinnati in West. Mus. Coll. show that it was a well developed anal piece, resting between the upper sloping side, of ^{one} of the larger first and second radials

When we speak of upper and lower Coal Measures of the west, we merely mean arbitrary divisions of the true coal-M. and not by the term Lower Coal M. the equivalent of the coal bearing strata below the mountain limestone of England. Some times called Lower Coal M. by English geologists

Avicula picta Hann. Occurs in upper Coal M. at Springfield Ill. Also same horizon Big Creek, Perry Co. Pa. and

Poductus fragilis, Murch. occurs in
the Upper Coal. Ill. Springfield Ill.

Camorphonia - There is a true
Camorphonia somewhat like *camorphonia*
glabellina, in the upper coal. Ill. at
Rock cr., Menard Co. Ill. It is the same
size as *Rhyssomella osagensis* Swallow -
and may have been included by him. It
differs from the true *osagensis* -
etc., of Murch., in having no plications
on the side, and the two in the series,
are more rounded. The whole shell conse-
quently looks smoother and less angular.

Cryptotiles Gillii, M. S. D. occurs
at Rock Creek, Menard Co., Ill.

Podolophaea reticulata, Cox.
on a very common shell, differing in
having faint plications in addition the
radiating ones - occurs in the shales at
Clinton Grundy Co. Ill.

The Upper Coal Measures of Ill.
contains no bed of coal more than 2
feet thick. The whole upper series is
only about 200 feet thick in Ill.

Dr. White proposes (in M.S.) to
name the large *Stantius*, I thought
might be *Illinoisensis* M. S., *St. ponder*
osus, as stated in his letter to me
of July, 24th 1868

Dr. White writes me that Owen
had proposed in case the Coral
her referred doubtfully to *C. Vermie*
ulana, that he now to call it *Cyath*
torquosa.

Most common *Stentor* reticulata, *St.*
caudata, *St. Lingula mucronata*
and *Cardium* ~~the~~ *fragilis*, Cox, and
Pod. muricata M. S. D. characteristic
of the shale above coal. 1865. Lower coal
in Ill.

above with bed 40 to 60 ft. from
 below the upper bed of the lower
 bed of Ill. weathered, Sp. can-
 nod, Prod. costat. P. brattianus, P. scal-
 -ric, L. nodosus, L. granulifera,
 A. sublit, A. Styrac. Prod. Punctatus,
 P. longispinus (splendens A. D.), Spines
 and acce. fragment. Crinoids. Bellinoph-
 nodocarinatus, Laticope. Allonensis? Sp.
 biculus, Chaetetes milliporaceus, and
 as Hedger creek, with numerous small mites.

Prof. Veril writes that the coal-
 M. Coral figured as Cyath. Vermicularia &
 P. gemmiferum, are one sp. as I thought,
 and that they belong to the G. Campophyllum.

The encrusting bryozoan Chaetetes-like
 coral is same and other upper Coral
 beds he says is a Distalifer and probably
 is a sp. of Distalifer. The so-called Cyath.
 Campophyllum, is another local form.

Vol 2, Cybele punctata

Is described p. 297, as having
 in the body 11. articulations,
 while fig 1.^a pl. 66 shows
 12. In the caudal shield
 there are said to 21 articula-
 tions in the middle lobe
 and 7 to 9 in each of the
 lateral lobes, while in
 the same fig above cited
 there are only 17 in the middle
 lobe - and in one of the
 lateral there are 10.

In fig 1.g. the middle lobe instead
 of having 21. segs. has 26. and
 in fig 1.^a the appear to be
 more

Vol. 2 Lealymene Whittonensis descr.
 p. 298. as having 8 or 9 segs. in mid.
 lobe. ^{5d & 5e} pl 66. while there are 10 figs

in the same

Mém. Pal. N.Y.

Vol 2. Homalonotus Delphinoccephalus - Described page 309 as having in middle lobe from 11 to 13 segments and from 7 to 9 in each of the lateral lobes, whereas in fig. 5. pl 68, there are 11 segments in each lateral lobe - & in fig. 7 pl. 66 there are 15 segments in each of the three lobes - being nearly double the number given for each lat lobe.

Mém. Pal. N.Y. —

Vol 1. Page 47 - Trinodens concentricus is described as having in the "thorax" six free articulations" while the enlarged figure; Pl. 67 - fig 1^b, given to illustrate the structure has only five articulations.

The caudal shield is also described as having "seven segments" in each lateral lobe, whereas the same figure cited above has 12 on one side and 14 to 15 on the other.

Vol. 1. Pl. 40 fig 4^b is erroneously represented as if the valvulations are not embracing

Vol. 2. Pl. 4, fig 6, Atrypa plicata described as "marked by 12 sharp plications", has in the figure 16 plications.

Mem - Pal. N.Y. Contin-

Vol. 2 pl. 67 - *Phacops similurus* is described page 304 as having in ^{each of} the lateral lobes of the caudal shield, eight articulations and ~~fifteen~~ in ~~the~~ central lobe, while in fig 7. pl. 67. there are 14 in one 13 in the other of the lateral lobes,

The central lobe of the caudal shield is described on same page as having fifteen articulations while in the same figure cited above there are 19 represented.

In fig 6. of the same plate which purports to represent a cast of the interior of the specum from which fig 7 was drawn, shows on

side 14 segments, with an intercalated half segment on one side and 13. on the other side, while in the central lobe there are 18 represented

Fig 2. of same plate shows 6 in one and 7. in the other of the lateral lobes of the caudal shield

Vol. 2. *Spirifer Niagaraensis* is described on page 264 as having from 20 to 30 plications, while in figure Pl. 54 - forty one may be ^{highest} counted. Either the number given in the description is too low or the figure is wrong

Vol 2. *Orthoceras nulliseplum* Pl. 4. ^{is} Septa described as being from "one sixth to one

seven the diameter" In fig. 8^a they are ~~apparently~~ ^{the upper part of} count but in fig 8^b there are 9 septa in a space equal to the diameter

Vol 2. *Gannapora junciformis* is described as — "Connecting septa 10 in an inch" while in fig 1^b & 1^a Pl 18. there are represented only from 6 to 7 in that space, generally only 6.

Vol 2. *Phaenopora explanata* is described as having 8 cells in the space of one line in transverse direction, ~~and~~ while in the figs 6^a & 6^b Pl. 18. there are 10 in that space. On same page there is said to be 10 to eleven cells

in one line in the longitudinal direction, while in fig 6^a & 6^b there are 6 to 7 only represented and in fig 6^d same plate there are often only five in the space of one line in long direction.

As these are very minute details however these deviations are of no great importance especially in a general figure; we should however expect to see greater accuracy of proportions in enlarged figures, at any rate in a work by an author who is very severe in his criticisms of the illustrations of others. Yet by reference to fig 6^e of same plate above cited we find an enlargement

in which the cells instead of being represented so as to bear the proportions of in the transverse and longitudinal diameters of 8 to 10 or 11, represented so that ~~that~~ in the longitudinal direction 2 occupy the space of 4 in the transverse direction

Vol. 2. *Rhinopora verrucosa* is described on page 48. as having 64 cells in the space of an inch, while figure 1^a pl 19 which is said to be "natural size" has only from 40 to 42 to the inch

Vol. 2. *Rhinopora tuberosa* is described on page 49 as having 80 to 85 cells to the inch, while in the

~~specimen~~ fig. 2^a said to be natural size only sixty to the inch ~~can~~ are represented

Vol. 2. *Imostella tenuis* - the length and breadth of the fenestulae are said ~~on~~ ^{about} page 57. to bear the proportions of five to three.

Vol. 2. *Orthis circulus* - described on p. 56. as having the rays or striae "curving upwards and running out on the hinge line" while on all the ^{figures} specimens on pl 20, ~~excepting on fig 6.7~~ they are almost exactly straight near the hinge, and in fig 6^a they curve a little downwards

Vol. 2. *Stomocrinus parvus* - page 185 is described as having a cal" of which the ^{thickness of} joints ^{are} nearly

equal the width of the col.
while in fig 1f which is
enlarged especially to show
the structure, the joints are
less than half the width
of the column.

Vol 2. *Spirifer crispus* is descri-
- on p. 262 as having "five
or 6, rarely 8, plications
on each valve" while
fig 3^b and 3^c ^{pl. 54.} show ten each
exclusive of the mesial fold
and fig 3^e shows 11.

July 16 1868
Geddy Chry for Nelson

266 50

Springfield Sept.
4 1867

Sept 4	Exp. on postage	1 00
" 4	on Rs. (4/11)	3 25
" 11	Exp. on two boxes of pens	1 25
" 15	Exp. on pk. for A.H. W.	40
" 16	Grand Union Green Collection	1 50
" 19	Exp. on book borrowed by Ag.	1 25
"	postage on proof Philad	21
" 27	Load (wood)	5 00
"	Carrying up same	50
" 30	Exp. on two pk. from Chicago (plates)	1 75
Oct 3	Cash bill	3 60
" 5	Postage on letter for A.H.W.	18
"	Photogr. Crumwells	1 00
" 17	Exp. on extras for Philad. Acad	1 15

22 0 50

[Faint, illegible handwriting]

23. Photographs of drawing. 5 00

28 P.O. ~~Boys rent~~ 1.63

8 Express on package 25

10 Postage on papers and photo
sent abroad 1 68

Camping up Iowa 50

~~26-07-08~~

27. Exposition 560

4752

Deer & Ex/ief on books
from Washington 1 20

Isotelus gigas Dr. Kay.

I saw a beautiful specimen of this species in Mr. Merriam's possession from Henton Falls N. H. that showed under a Thomson ^{microscope} the reticulations of the cuticle ^{very} fine. They are very minute however, and scarcely visible under a single-glass lens.

1868

Washington July 14,

Left with Mr Rhine,

\$866.00 Gold

Bonds 15.20 1000.00

1 do. 35.00.00 ; one fo. 100.00

Bills note \$50

and another on Gill for
\$1000.00 secured by Deed
of trust, which I have left
with Gill for record, after
which he is to leave it
with Mr. Force. The
same bundle left with Mr Rhine
contains many papers &c

1000

1000.00

1150.00

6.00.00

1000.00

100.00

3900.00

Washington Feb. 15th 1868

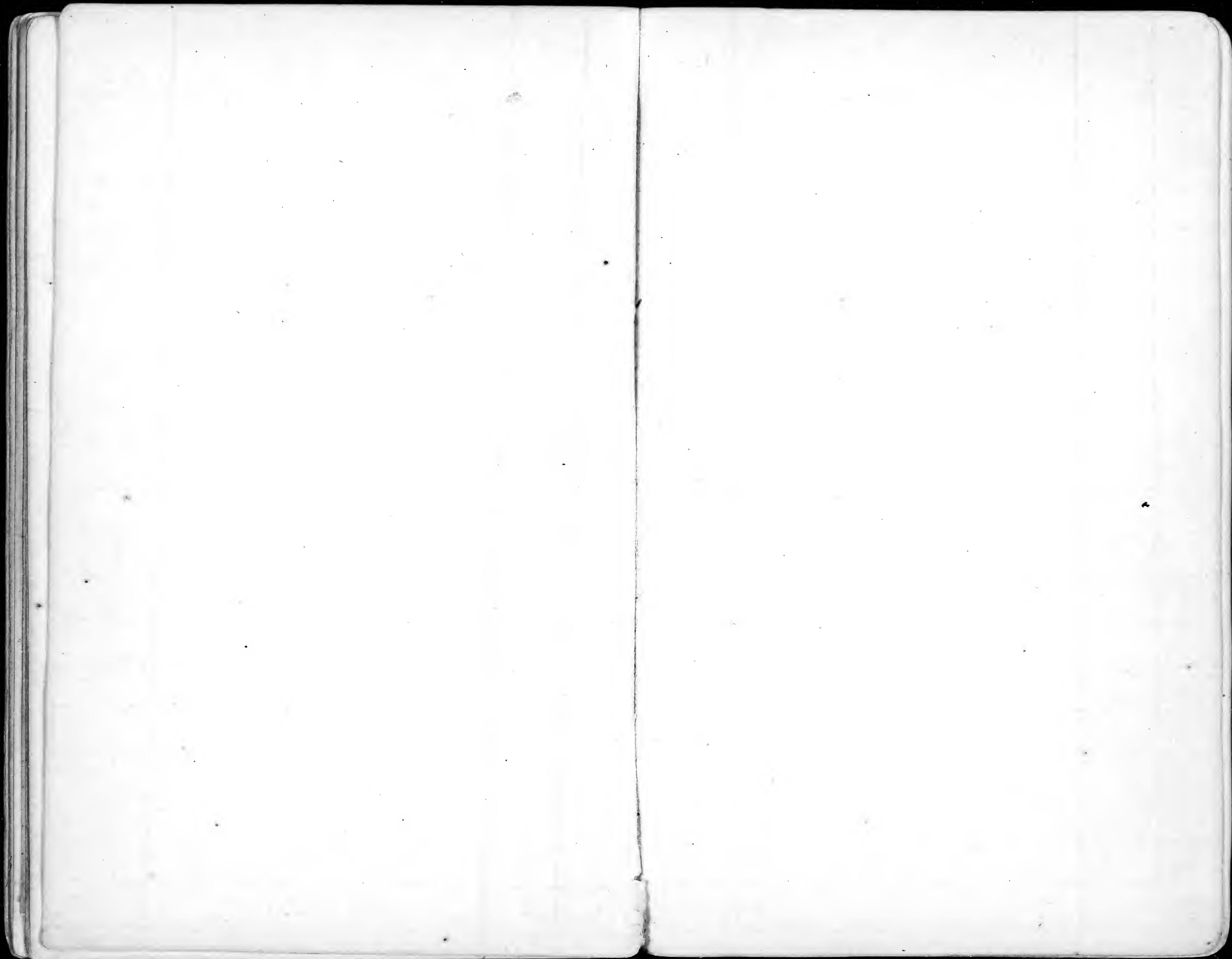
Hayden has collected for me
and has in his hands just
expenses incurred by me
in Nebraska Survey 80.00

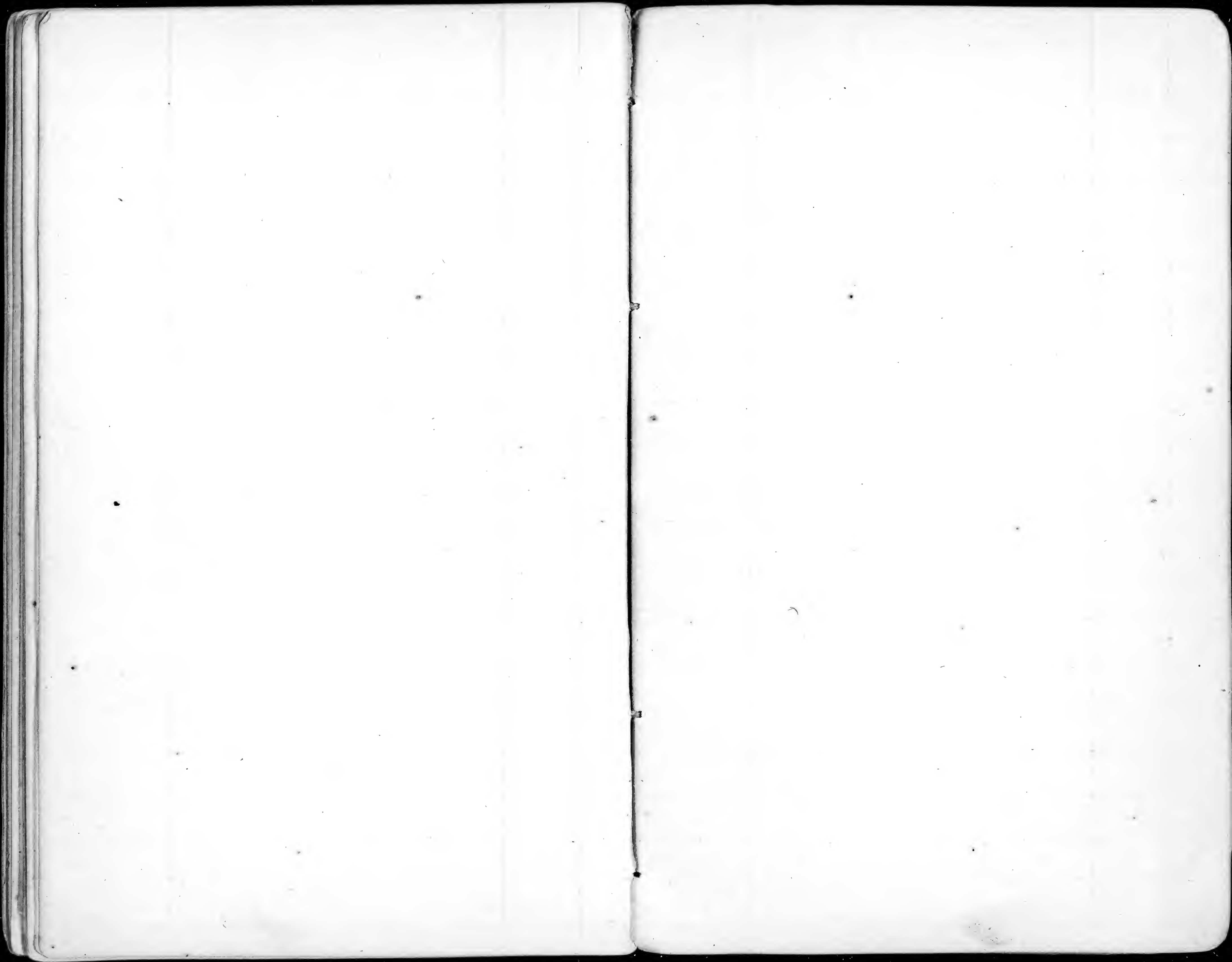
Also is to collect for

me 2 months and 14 days
salary at \$150 (Johnston) 374.00
and a little bill of items
paid out by me, being
expenses on specimens to Thompson
D-White, &c. &c. bill rendered 21.45

July 15. 1868 Hayden has my copy of Sec
Taylor's statistics of coal & Lignite. Am. An. Jan.,
Apr. 6th 1867 paid on supplies
on specimens of S. M.S. from Salt Lake
for Hayden's Report 75

July Postage on reply to Dr. Allen 1.50
Printing same 2.40





Turquoise effervescent
Refreshing ~~and~~ Stitzer apparent

Loaned to Mr. Hagee
My papers on Capt. Simpson's
fossils and the geol. of his river
Also to Mr. Hagee a paper
on China Geol.

Hayden has my copy
Fremont's Report
~~and Gaffrellin's travels in~~
~~America~~

March, 19th

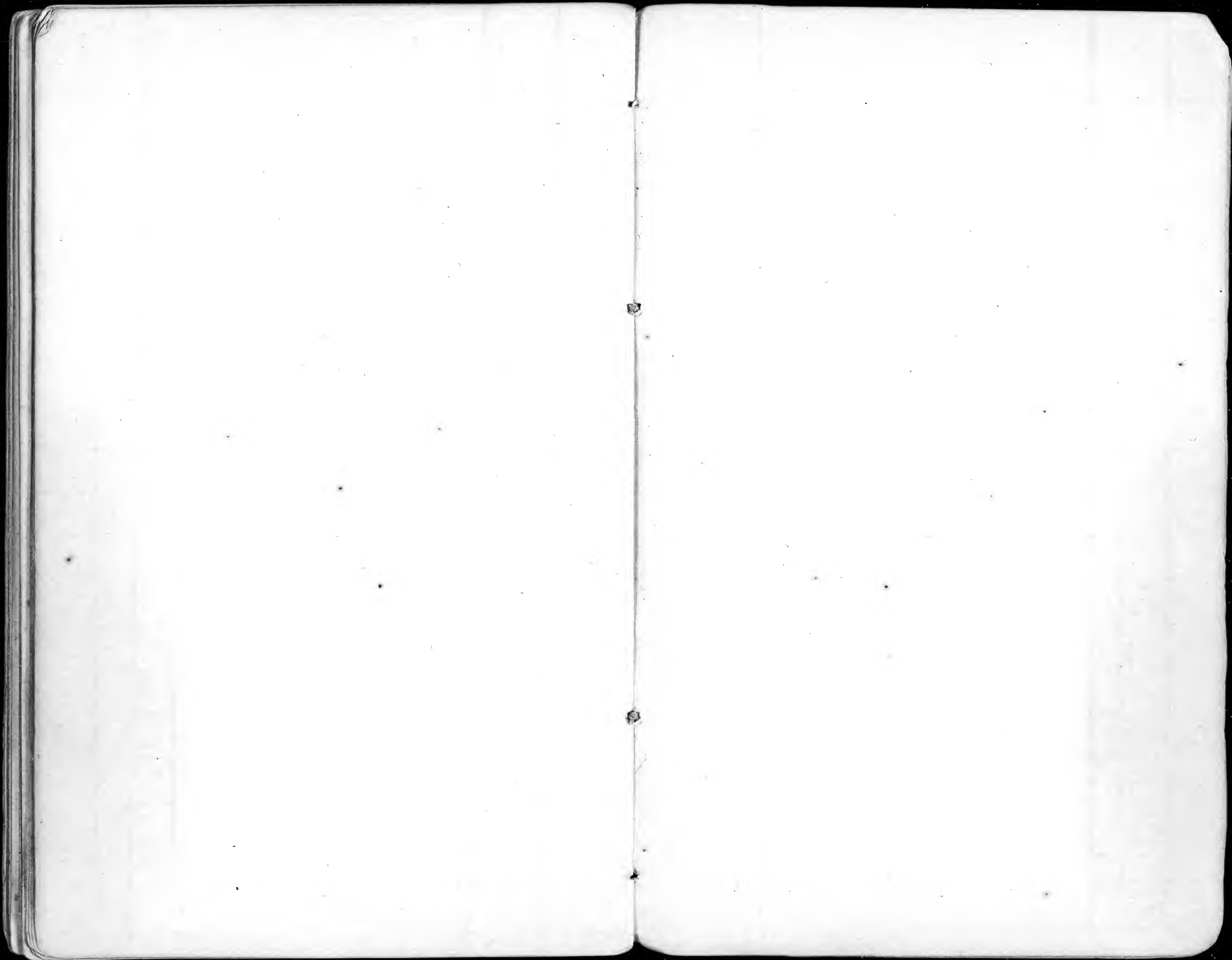
Dr. Elbridge of Agricult Library
borrowed 1st vol. Iowa Report
and 1st vol. Arkansas Report

Gill took Hermannsen

Decr. 27th 1869

Mem. in regard to plates drawn
by me and left at Springfield Ill.

- 1 Pl. with long Probosc. Shotters
- 2 Coal in Crinoids & Bryoz
- 3 Burlington Crinoids Scaph. Ozra
- 4 Coal. & Brach. Chiton, little bryoz
- 5 Coal in Limestone with a few
Brachiop. - Murella & c
6 Keokuk. Echinoids ^{sharpish} & Crinoids
Platyceras on Crinoids¹²
- 7 Burlington Crinoids showing int.
Characters - 1 Echinoid
8. Burlington Str. Vault Larns
Pentamerus & c
9. Burlington Amphoraer.
with arms. Digestor. & c



Washington July 12, 1868

Little things due me for
expenses on foot survey, Nebraska 21/45

Washing the Aug 8th 1839 -

don't count shirts

3. Under shirts

1. for drawers

4 for socks

2 Handkerchiefs all 17/100

Aug 15th - Returned from New Haven to Washⁿ

Books returned to
Smithsonian Inst

Apr 11th 1868

Worms (Scorpions)

Palaeontographica 3-1853
and vol. 1. same

Monatsbericht der
K. P. Akad. In Berlin
1861-1-

May 27 - 1868 Returned to
Smithsonian Inst. Sent some vol. See
vol XV and vol XIX.

The Biologist vol IV

Prodrôme de la Monog. Crinoïdica

Prodrôme Index palaeontologiques

1 vol. the one showing the goal, the
Hesperia.

Mem. May 19th 1870
The Printer Philad. Proceed. for 1869
sent bill against Mark Wrotham for
Est. ~~the~~ 12.30, = 6.60, and
12.90. = 31.80. I sent money
order today to Prof Seely for my half.
He paid to Printer, and sent the bill
to Wrotham for him to pay his half.

May 19th 1870 - Also sent
money order to Prof Seely for
3.36 cents to pay my dues to Am.
Ass. for Salem meeting, and postage
on this vol. Proceedings of Ass.

Account with Hayden
Washington Dec 1839

To Dr. Miller for Prop
Tanner furnished \$3.00

6 pages of small back are
also sent in

comparisons

July 18 paid in L. C. for
for re-papering boards
for plates of fossils 75

" 20 paid for station paper
for 200 pages of plates
already done 12

Apr. 5 express on plates sent to Henry
for C. W. Garrison 75

Apr. 16 Ex. p. fossils sent to Mr.
Carrington 25

May 1st Jones on his way to
Kansas 1.66

May 3^d express on paper com-
-paring description fossils to
Phila 250

June 11th Stationer of day sent
for copy 1275

To Mr. P. H. McChesney on
land in Kansas \$20

24
36
130

from

hr.

1859 June 29 Paid boarding \$7.50

June 15 - 1859

July 5 - 1859

Took Room in F. St.

and commenced boarding

at Mr. Wagoner Aug 7th

Commenced taking my
breakfast at my room on
Monday 14th Aug - 1859

Moved to Room on 13th St
Sept 13th

Removed to 10th St
13th Street - 1860

05
March 1860

Hines N. S.

Andrena subglabrata H. S.

-ident with

Andrena carolina H. S.

Andrena longifrons

March 28 - 1860 94

March 30 - 1860 136

March 31 - 1860 130

March 31 - 1860 130

March 31 - 1860 130
March 31 - 1860 130

March 31 - 1860 130

Arrived at Washington from
Springfield Dec. 29. 1869

Commenced boarding with Mr.
Baker Dec. 30.

